

SIPCAM INAGRA

MATERIAL SAFETY DATA SHEET

(According to the Dir 2001/58/CE)

CITROFIX



1. IDENTIFICATION OF THE PRODUCT AND COMPANY

Company SIPCAM INAGRA, S.A.	
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Spanish National Institute of Toxicology Emergency Phone: +34 91 562 04 20	

Trade Name:	CITROFIX
Nomenclature:	2,4- D-isobutyl (16 g/l)
Chemical Name (a.i.):	2-methylpropyl (2,4-dichlorophenoxy)acetate
Product Code:	28.61.00
Type of Formulate:	EMULSIFIABLE CONCENTRATE (EC)
Use:	GROWING REGULATOR

2. COMPOSITION/INFORMATION ON INGREDIENTS

General composition: 2-methylpropyl (2,4-dichlorophenoxy)acetate

COMPONENTS Hazardous	Concentration % p/p	EINECS Name	NºEINECS	NºCAS	Phrases R (See section 16)	Symbol Classification
2,4-D-isobutyl	2.84		216-992-5	1713-15-1	20/21/22	
EMULSIFIERS	5.20					
XILENE (up to)	100		215-535-7	1330-20-7	10-11-20/21-38	

3. HAZARDS IDENTIFICATION

Physical Chemical Hazards

The product is Flammable

El product is non-explosive, non-comburent, and non-corrosive.

Toxicology (Symptoms)

Inhalation

Harmful by inhalation

Ingestion/Aspiration:-

Skin and eye contact:

Harmful in contact with the skin.

Irritating to skin.

General Effects Symptoms:

Poisoning may cause:

- I- Irritation to eye, skin and mucosity. Sensation of burn along the digestive tract, strong tightens sensation on the chest..
- Vomiting, abdominal ache, diarrhoea.
- Headache, fatigue, weakness, giddiness, euphoria, hurt, sickness, blurred vision, coma.
- Instability on walking, unconsciousness, convulsions.
- Irregularities on the Cardio-respiratoy system. Arrhythmia.

Hazard on the Environment

Dangerous for the Environment.

Moderately hazardous for mammals, fishes and birds.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID

Symptoms:

Ver Apartado 3.

General Measures:

Remove individual to fresh air. Keep the individual warm and quiet. If the individual is unconscious, position and transport in recovery position. Do not leave the individual alone at any time. Take the individual to a medical centre, or seek medical advice immediately and show the container or label.

Advice to the doctor:

- In case of ingestion, stomach pumped, avoiding aspiration.
- In case of convulsions give Diazepam.
- Stimulate diuresis.
- Symptomatic treatment.
- Contraindication: Epinefrin and other stimulating.

Inhalation:

In case of accident by inhalation: remove casualty to fresh air and keep at rest. If necessary, artificial respiration may be done. Seek medical advice.

Ingestion:

If swallowed, do not induce vomiting: seek medical advice immediately (show the label where possible). Do not give anything to eat.

Eye contact:

In case of contact with eyes, rinse immediately with plenty of water and don't forget to remove contact lenses. Seek medical advice

Contact with the skin:

Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty soap and water. Seek medical advice.

5. FIRE FIGHTING MEASURES

Extinguishing Measures:

In case of fire use extinguishing powder, foam, CO₂, and pulverised water.

Foam	CO ₂	Dry Powder	Water	Others
X	X	X		

Counter-indication:

Do not use water jet spray as it spreads the product. If necessary, after use collect it in appropriate containment to avoid environmental contamination.

Special Measures:

Water may be used to cool fire-exposed containers in order to protect personnel and to disperse vapours.

Xilene vapours may cause explosion if it burns in a closed area. Explosion limits in air: 1%-6%

Special Dangers:

The product is flammable and will burn if involved with fire.

Xilene vapours may explode if it burns in a closed room. Explosive limit in air: 1%-6%.

Gases as a Product of the Combustion:

Hazardous combustion products are mainly carbon monoxide and carbon dioxide although other hazardous products, such as sulphur oxides.

Protective Equipment against Fires

Fire fighters should wear normal protective equipment (full bunker gear) and positive-pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Environmental Precautions:

This material is water pollutant and should be prevented from entering sewers, drainage systems and bodies of water. Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point

Personal Precautions

Aisle the area of drainage and do not allow unauthorised persons to enter. Avoid contact and inhalation of the product. If drainage has occurred in a close area, it must be ventilated.

Precaution for Detoxification and Cleaning Procedures:

Absorb spills with inert material (sand, sawdust, earth, etc.) then place in a chemical waste container. Dispose of this material and its container at hazardous or special waste collection point

Personal Protection:

Wear protective equipment, coveralls and normal clothing. Chemical resistant gloves such as barrier laminate, Viton, butyl nitrile or neoprene rubber (>14-g). In closed or not well-ventilated areas, wear mask filter for organic vapours and solvents. Keep unprotected persons away

7. HANDLING AND STORAGE

Handling

Before opening the container, read the label. Use gloves and useful protective equipment to avoid prolonged contact and breathing of vapours or spray mist. Avoid poisoning of goods, and animal food as well as running water and fish farms. It can be harmful by inhalation and in contact with the skin. It can irritate the skin. The product is harmful to the Environment. Do not smoke, eat or drink while handling the product. Wash thoroughly with soap and water after handling the product. Handle on the same direction as the wind. In case of sickness seek medical advice as soon as possible.

Storage:

- Store under normal conditions of moisture, temperature and ventilation.
- Do not expose to heat, light or moisture.
- Keep the product away from any source of ignition.
- Keep the product in its original container.
- keep away from children.
- Keep away from foodstuffs, beverages and food.

Specific uses:

CITROFIX® is a growing regulator advised to avoid the falling of ripe orange, in this way allows postponing the harvest if advisable for at least, two or three months.

Caution:

Do not spray with CITROFIX on cool days or windy.

Do not treat trees on sprout since these may feel the effects of the treatment and do not spray young trees.

CITROFIX® may cause harm to grapevine and vegetable when the spraying is targeted directly with the Biol. Farm. To avoid this, according to the norm O.M. 08/10/73 a margin of 20 metres in land treatments and 200 metres in aerial treatment should be establishes.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

General Precautions:

Avoid large exposure to product, even if it's a small amount.

Environmental Control:

To prevent risks for the aquatic organisms, do not use next to watercourses, leave without treatment a band of 10 meters from them.

DO NOT CONTAMINATE THE WATER WITH THE PRODUCT NOR WITH THE CONTAINER.

Personal Protection Equipment:

Protection Respiratory: Use self-breathing apparatus.

Hand Protections: Chemical resistant gloves such as barrier laminate, viton, butyl nitrile or neoprene rubber (>14 µg).

Eye Protection: Safety glasses, splash goggles or face shield. Contact lenses should not be worn.

Skin Protection: Coveralls and normal clothing.

Hygienic Practises at Work:

Good practise laboratories and hygienic measures should be taken reducing unnecessary exposure. Hot water showers should be used. It is convenient to have another set of clothes for changing. The clothes should be washed immediately after use and not to be worn again unless they've been well cleaned.

All individual protection measures should be certified by the CEE normative.

Thresholds limit values:

TLV STEL = Xilene : 651 mg/m³

TWA = Xilene : 434 mg/m³

= 2,4-D (acid): 15 mg/m³

9. PHYSICAL AND CHEMICAL PROPERTIES

Aspect: Transparent Liquid.	Melting point: N/A is a liquid
Colour: Pink-orange	Boiling point: > 196°C (2,4
Density: 0.865-0.875 g/ml	pH = 5.0-6.0 (al 1% p/v)
Solubility in water: 8,7 x10 ⁻⁵ g/l at 25°C (2,4-D-2- ethylhexyl)	Solubility in general: Miscible in most organic products
Vapour Pressure: 1,4 Pa at 25°C ()	Surface Tension: 33.1-33.5 mN/m
Explosive Properties: Not explosive.	Comburent properties: Not comburent
Flash Point: 27°C (c.c) Xilene	Flammability: 540°C Xilene
Heat of Combustion: UnKnown	Viscosity: Doesn't apply as it isn't a non-Newtonian liquid.
Speed of Evaporation: unknown	Vapour density: Unknown
n-octanol/water coefficient: logP 0,11 at pH 7 y 22°C (2,4- D-2- ethylhexyl)	
Other Physical chemical data: Not known.	

10. STABILITY AND REACTIVITY

Stability:

The product is stable under normal conditions of packaging and storage, for at least two years.

Conditions to avoid

Keep away from moisture, heat, and direct light.

Keep away from any point of ignition.

Materials to avoid:

Keep away from oxidants, acids and alkalis.

Decomposition products:

Hazardous combustion products are mainly carbon monoxide and carbon dioxide although other hazardous products, such as chloride oxides.

11. TOXICOLOGY

Paths of Entry:

In contact with eyes and skin, by ingestion and inhalation.

Chronic and acute effects:

Harmful by inhalation and in contact with the skin. Irritates the skin.

Poisoning may cause:

- Irritation to eye, skin and mucosity. Sensation of burn along the digestive tract, strong tightens sensation on the chest..
- Vomiting, abdominal ache, diarrhoea.
- Headache, fatigue, weakness, giddiness, euphoria, hurt, sickness, blurred vision, coma.
- Instability on walking, unconsciousness, convulsions.
- Irregularities on the Cardio-respiratory system. Arrhythmia.

2,4 D Acid tech:

Irritation to skin in rabbit: slightly irritating.

Irritation to eyes in rabbit: seriously irritation to eyes.

Xilene:

Irritation to skin, irritating to eyes.

Not sensibiliser for the skin.

DL 50 a.i.**2,4- D:**

DL50 acute oral for rats: 639-764 mg/kg.

DL50 acute oral for mice: 138 mg/kg.

DL50 acute percutaneous for rats: >1600 mg/kg

DL50 acute percutaneous for rabbits: > 2400 mg/kg

CL50 (24h) inhalation for rats:> 1.79 mg/l

Xilene:

DL50 Oral in rat: 2000 mg/kg

DL50 Skin in rat: >2000 mg/kg

CL50 Inhalation: > 5mg/l

Carcinogenic:

Not known

Reproduction:

Not known.

12. ECOLOGICAL INFORMATION

Effects on the environment

Persistence: The Half-life of 2,4- D-2- ethylhexyl in soil is 1 day

Degradability: In soil microbial degradation involves hydroxylation, decarboxylation, cleavage of acid side-chain, and ring opening. Half-life in soil <7days.

Mobility: Rapid degradation of 2,4- D-2- ethylhexyl, in soil prevents significant downward movement under normal conditions.

Potential de Bioacumulación: 2,4- D

In rats, following oral administration, elimination is rapid, and mainly as the unchanged substance. Following single doses up to 10 mg/kg, excretion is almost complete after 24 hours, although with higher doses, complete elimination takes longer.

In plants, metabolism involves hydroxylation, decarboxylation, cleavage of acid side-chain, and ring opening.

Ecotoxicity:

To prevent risks for the aquatic organisms, do not use next to watercourses, leave without treatment a band of 10 meters from them. Toxicities for 2,4-D acid tech. Are:

Aquatic toxicity:

CL50 (21d) in *Daphnia magna*: 235 mg/l

CL50 (48h) in *Oncorhynchus mykiss*: 1,1 mg/l

CE50 (5d) in *Selenastrum capricornutum* 33.2 mg/l

CE50 (14d) in *Lemna gibba* 0.58 mg/l

Toxicity to birds:

DL50 oral in *Colinus virginianus*: 500 mg/kg

DL50 oral in *Coturnix japonica*: 668 mg/kg

DL50 oral acute in pheasants: 472 mg/kg

DL50 oral acute in wild duck : >1000 mg/kg

DL50 oral acute in young pigeon: 668 mg/kg

CL50 (95h) in *Anas platyrhynchos*: > 5620 mg/l

Toxicity to bees:

DL50 Oral: 104,5 micrograms/bee

Toxicity to worms:

CL50 (7d): 860 mg/kg.

NOEC (14d): 100 g/kg.

13. DISPOSAL MEASURE CONSIDERATIONS

Methods of elimination of the product:

Refer to manufacturer/supplier for information on recovery/recycling. This material must be disposed of as hazardous waste. Avoid release to the environment. Do not empty into drains, dispose of this material at hazardous or special waste collection point.

Packaging Elimination:

Each container once is emptied in the spray tank, must be washed thoroughly three times with water jet spray and the contaminated water poured into the spray tank. Empty bottles should be disposed at hazardous or special waste collection point.

14. RELATIVE INFORMATION TO THE TRANSPORT

Especial Precautions:

It's forbidden the transport of hazardous material with foodstuff, drinks or any other personal items.

Additional Information:

ADR/RID: Class: 3

Code Classification: *F1*

Packing group: III

NºONU: 1993

NIP: 30

Labels: 3

Proper Shipping Name: *INFLAMMABLE LIQUID, N.E.P. (Xilene)*

IMDG:

Class: 3

Code Classification: *F1*

Packing group: III

NºONU: 1993

NIP: 30

Labels: 3

Proper Shipping Name: *INFLAMMABLE LIQUID, N.E.P. (Xilene)*

Stowage and Segregation: *Category A*



15. REGLAMENTARY INFORMATION

Tag:



Phrases R:

R10: Flammable

R20/21: Harmful by inhalation and in contact with skin

R38: Irritating to skin

R52/53: Harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment.

Phrases S:

S2: Keep out of the reach of children.

S13: Keep away from food, drink and animal feedingstuffs.

S23: Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

S36: Wear suitable gloves.

S43: In case of fire, use foam, carbon dioxide, chemical powder and pulverised water. "Never use water"

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the labels where possible).

SP1: DO NOT CONTAMINATE THE WATER WITH THE PRODUCT NOR WITH THE CONTAINER

Other regulations: Reserved use to farmers and professional users.

16. OTHER INFORMATION

GLOSSARY:

- | | |
|---|-----------------------------------|
| - a.i.: active ingredient | - N/a: No applicable |
| - CAS Chemical Abstracts Service. | - N.D.A.: No Data Available. |
| - CE50: Median Effective Concentration | - STEL: Short Time Exposure Limit |
| - CL50: Concentration to kill 50% of test organisms | - t.p.: technical product |
| - DL50: Dose to kill 50% of test organisms | - TLV: Threshold Limit Value |
| - NOEC: No Observed Effect Concentration | - TWA: Time Weight Average |

The above data has been updated on the basis of the best existing sources of information. The above information is believed to be correct, but does not claim to be all-inclusive and should be used only as a guide.

Phrases R of Section 2:

R10: Flammable

R11: Highly Flammable

R20/21/22: Harmful by inhalation, ingestion and in contact with skin

R38: Irritating to skin

R 50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Modifications with respect to the Revision 0:

Update of some data.